

sugar; coir, a commercial name for the fiber obtained from the husk of the coco-nut; copra, the desiccated kernel or oil-cake; and oil.—J. M. C.

Cocoa.—The important cultural plants of the tropics are gradually becoming known from the modern standpoint, and the most recent contribution in this field is the large volume on cocoa by VAN HALL,⁵ director of the institute for plant diseases and cultures at Buitenzorg, Java. In the brief historical account it is stated that the first knowledge and use of the plant came to Europe in connection with the conquest of Mexico, where Cortez found it in extensive cultivation under the name "cacao," as he reported it. Some conception of the kind of scientific data included in such a study of an important cultural plant may be obtained from some of the titles of the chapters, such as Geographical distribution and climatic conditions, Chemistry of cocoa and cocoa soils, Botanical characteristics of the cocoa plant, Varieties of cocoa, Cultivation of cocoa, Fermentation, Diseases and enemies, Cocoa-growing countries.—J. M. C.

Flora of California.—Part 5 of *A flora of California* by JEPSON⁶ has just appeared. The first parts were noticed in this journal,⁷ attention being called to the general high character of the work. This part completes the Portulacaceae, includes the Caryophyllaceae, and begins the Ranunculaceae. A new genus of Caryophyllaceae is proposed (*Eremolithia*), based upon *Achyronychia Rixfordii* Brandegee.—J. M. C.

NOTES FOR STUDENTS

The gases in the floats of marine algae.—This subject has attracted the attention of a number of investigators during recent years. The fact that it is being investigated from so many points of view gives hope that we may soon have fairly complete knowledge of the subject. LUCAS⁸ has investigated the subject from the point of view of the origin of the gas. The following Australian marine algae have vesicles filled with gas: Sargassaceae (*Sargassum*, *Carpophyllum*, *Turbinaria*, *Cystophora*, *Cystosira*, *Scaberia*, *Phyllospora*), Fucaceae (*Hormosira*), and Laminariaceae (*Macrocystis* and possibly *Adenocystis*). In young plants, and even in mature fruiting individuals in sheltered situations in shallow water, there are no vesicles.

⁵ VAN HALL, Dr. C. J. J., *Cocoa*. 8vo. pp. xvi+515. *figs.* 140. London: Macmillan. 1914. 145.

⁶ JEPSON, W. L., *A flora of California*. Royal 8vo. Part V, pp. 465-528. *figs.* 14. San Francisco: H. S. Crocker Co. 1914.

⁷ BOT. GAZ. 49:153. 1910.

⁸ Lucas, A. H. S., The gases present in the floats of certain marine algae. *Proc. Linn. Soc. New South Wales* 36:626-631. 1912.